

## **REMARKS**

### **Status of the Claims**

Claims 1-4, 7, 9, 22, 24, 26, 28, 30, 31, 37, 41-43, 46, 49, 53, 57-61 and 65-76 are currently pending. Claims 65-76 were withdrawn by the Examiner as being drawn to nonelected inventions. Claims 1-4, 7, 9, 22, 24, 26, 28, 30, 31, 37, 41-43, 46, 49, 53 and 57-61 were examined and rejected.

With this amendment, claims 2, 3, 61 and 65-76 are canceled, claims 1, 7, 9, 22, 24, 41, 43 and 58 are amended, and new claims 77 and 78 are added. Support for the amendments may be found throughout the application as filed, for example, on page 10, lines 10-11 and page 16, lines 10-19; in Examples 1-4 (pages 34-46); and in original claims 2, 3 and 61-64. No new matter has been added. Upon entry of this amendment, claims 1, 4, 7, 9, 22, 24, 26, 28, 30, 31, 37, 41-43, 46, 49, 53, 57-60, 77 and 78 will be pending. Entry of the amendment and reconsideration on the merits are respectfully requested.

### **Rejection under 35 U.S.C. § 112, Second Paragraph**

Claims 1-4, 7, 9, 22, 24, 26, 28, 30, 31, 37, 41-43, 46, 49, 53 and 57-61 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, because claim 1 recited the limitation “the variations in length and sequences of the immobilized positive control probes” without an antecedent basis. (The OA at page 3).

Claim 1 has been amended to address the lack of antecedent basis. Accordingly, it is respectfully submitted that this rejection may now properly be withdrawn.

### **Rejections under 35 U.S.C. § 103**

Claims 1, 3-4, 9, 22, 24, 26, 28, 30-31, 37, 43, 46, 49, 53 and 57-61 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Apple *et al.* (US 5,567,809, “Apple”),

Samartziduo *et al.* (*Life Science News*, 2001, (8):1-3, "Samartziduo") and Trau *et al.* (*Anal. Chem.* 2002, (74):3168-3173, "Trau") in view of Stockton *et al.* (U.S. Patent Pub. No. 2002/01875505, "Stockton"). (The OA at pages 4-16).

Claims 1, 2 and 7 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Apple, Samartziduo and Trau in view of Stockton, and further in view of Patterson *et al.* (US 5,843,640, "Patterson"). (The OA at pages 16-18).

Claims 1 and 41 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Apple, Samartziduo and Trau in view of Stockton, and further in view of Straus (U.S. Patent Pub. No. 2002/0086289, "Straus"). (The OA at pages 18-19).

Claims 1 and 41-42 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Apple, Samartziduo and Trau in view of Stockton and Straus, and further in view of Delenstarr *et al.* (U.S. Patent Pub. No. 2002/0051973, "Delenstarr"). (The OA at pages 19-21).

With respect to claim 1, Apple allegedly teaches a method of HLA DR beta (DRB) DNA typing comprising isolating the target nucleic acids from cell lines and further teaches using genomic DNA that contains other genes not related to HLA DRB. Apple further allegedly teaches a chip (reverse dot blot) comprising a membrane support suitable for use in nucleic acid hybridization having immobilized thereon an oligonucleotide probe complementary to DRB target nucleotide sequence. Apple further allegedly teaches that the chip contains probes specific for particular allele types and additionally contains a control probe that detects all of the alleles. (The OA at pages 4-5).

The control probe of Apple allegedly corresponds to the positive control probe of the present application because it detects all of the HLA DRB alleles. Apple further allegedly teaches that the positive control probe creates a hybridization signal having intensity equal or less than the positive dots on the chip and provides a guide as to the minimum dot intensity that should be scored as a positive. Apple further allegedly teaches hybridizing the array and assessing hybridization between said target nucleotide sequence and/or said another nucleotide sequence and said probes comprised on said chip to determine the type of DRB target gene. The Office acknowledged that Apple does

not teach a negative control probe, a hybridization control probe, an immobilization control probe, or multiple positive control probes with variations in length and sequence. (The OA at page 5).

Claim 1 has been amended to recite a number of additional limitations related to the nature of the target nucleotide sequences and oligonucleotide probes. Support for this amendment may be found throughout the application as filed, for example, on page 10, lines 10-11 and page 16, lines 10-19; in Examples 1-4 (pages 34-46); and in original claims 2, 3, 61 and 62. Since claims 4, 7, 9, 22, 24, 26, 28, 30, 31, 37, 41-43, 46, 49, 53, 57-60, 77 and 78 depend, directly or indirectly, on claim 1, they all necessarily incorporate every limitation of claim 1.

Since none of the cited prior art references, alone or in combination with other cited art, teaches all the limitations of claim 1 as amended, Applicants believe that this amendment effectively addresses all of the outstanding obviousness rejections. Accordingly, it is respectfully submitted that this rejection under 35 U.S.C. § 103(a) may now properly be withdrawn.

**CONCLUSION**

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing **docket No. 514572001200**. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

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Respectfully submitted,

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